The Mysore Gazette.

Vol. 42.] PUBLISHED BY AUTHORITY. [No. 5.

BANGALORE, THURSDAY, JANUARY 31, 1907.

PART IV.

OFFICIAL PAPERS.

Season Report for the Week ending with the 4th Saturday in 1907 (*26th January* 1907).

District and Station.	Rainfall up to 8 A.M. on Saturday. This week	Last ten years' average for the corresponding week.	Up to the end of the week from 1st January 1907. This year.	Average of past ten years.	Excess (+) or defect(—) of column 4 compared with column 5.	Price of food grains in seers per rupee and market fluctuations in prices of food grains.
1	2	3	4	5	6	7

	2		3		4		5		6		7			
	I.	c	I.	c.	I.	c.	I.	c.	I.	c.		This week.	Past week.	Past ten years' fortnightly average.
												Seers.	Seers.	Seers.
BANGALORE.														
Bangalore C. & M. Station ...	...	...	..	...	...	...	...	...	..	...				
" City & Taluk...	..	...	..	1	...	72	...	2	+ 0	70				
Hoskote ...	...	...	...	...	...	...	...	4	— 0	4				
Dodballapur ...	..	...	...	...	...	14	...	...	+ 0	14				
Nelamangala ...	...	...	...	...	..	19	...	...	+ 0	19	Rice, 2nd sort.	7·00	7·00	9·08
Kankanhalli ...	...	...	...	4	...	30	...	14	+ 0	16				
Magadi ...	...	...	...	...	1	...	...	...	+ 1	...	Ragi	15·00	15·00	19·70
Channapatna ...	...	...	...	...	...	24	...	10	+ 0	14	Kulthi	12·00	9·00	...
Anekal ...	...	...	...	1	...	49	...	6	+ 0	43	Kadale	9·00	9·00	9·69
Devanhalli ...	..	...	...	..	2	89	...	2	+ 2	87				
Closepet ...	...	...	...	1	1	66	...	6	+ 1	60				
District average...	...	...	...	1	...	76	...	4	+ 0	72				
KOLAR.														
Kolar ...	...	...	...	1	...	...	...	11	— 0	11				
Bowringpet ...	...	...	...	...	...	...	...	8	— 0	8				
Chintamani ...	...	...	...	...	..	83	...	19	+ 0	64	Rice, 2nd sort.	10·00	8·00	8·75
Mulbagal ...	..	...	...	.	...	...	...	24	— 0	24				
Sidlaghatta ...	..	...	...	3	2	87	...	25	— 2	62	Ragi	18·00	16·00	19·30
Chikballapur ...	...	...	...	18	...	76	...	39	— 0	37	Kulthi	12·00	12·00	
Bagepalli ...	...	...	...	...	...	67	...	8	+ 0	59	Kadale	8·50	8·50	8·45
Goribidnur ...	..	...	...	6	...	86	...	11	+ 0	75				
Malur ...	..	...	...	1	1	34	...	5	+ 1	29				
Srinivaspur ...	...	...	...	5	...	19	...	17	+ 0	2				
Gudibanda ...	...	...	..	...	1	63	...	13	+ 1	50				
District average...	...	...	...	3	...	83	...	16	+ 0	67				
TUMKUR.														
Tumkur ...	...	...	...	2	...	30	...	5	+ 0	25				
Maddagiri ...	...	...	..	1	...	42	...	11	+ 0	31				
Chiknayakanhalli ..	...	...	...	...	...	...	...	...	...	...	Rice, 2nd sort.	8·50	8·50	8·90
Sira ...	..	...	...	..	...	60	...	10	+ 0	50				
Gubbi ...	...	...	...	3	...	27	...	5	+ 0	22	Ragi	20·00	20·00	22·30
Tiptur ...	...	...	...	2	...	48	...	2	+ 0	46	Kulthi	12·00	12·00	
Pavagada ...	...	...		...	...	12	...	7	+ 0	5	Kadale	9·00	9·00	8·50
Kunigal ...	...	...	...	4	...	81	...	4	+ 0	77				
Koratagere ..	...	...	...	11	...	3	...	16	+ 0	13				
Turuvekere ...	...	...	...	3	...	50	...	3	+ 0	47				
District average...	...	...	..	3	...	35	...	6	+ 0	29				

District and Station.	Rainfall up to 8 A. M. on Saturday. This week.	Last ten years' average for the corresponding week.	Up to the end of the week from 1st January 1907. This year.	Average of past ten years	Excess (+) or defect (−) of column 4 compared with column 5	Price of food grains in seers per rupee and market fluctuations in prices of food grains.
1	2	3	4	5	6	7

		I.	c.	I.	c.	I.	c.	I.	c.	I.	c.		This week	Past week.	Past ten years' fortnightly average.
MYSORE.	Mysore	...	...	...	...	...	6	...	26	−	0 20				
	Chamrajnagar	...	...	...	...	...	17	...	12	+	0 5		Seers.	Seers	Seers.
	Seringapatam	...	...	..	...	...	18	...	20	—	0 2	Rice, 2nd sort.	...	8·50	10·47
	Hunsur	...	...	...	...	...	18	...	10	+	0 88				
	Yedatore	...	...	..	...	...	40	...	36	+	0 4	Ragi	...	15·00	18·80
	Heggaddevankote	...	...		...	...	....	...	...	...	...	Kulthi	...	13·00	...
	Gundlupet	...	...	..	...	1	46	...	14	+	1 32	Kadale	...	9·00	9·37
	Nanjangud	...	...	..	2	...	7	...	8	—	0 1				
	T.-Narsipur	..	...	...	5	...	10	...	9	+	0 1				
	Malvalli	..	...	...	4	...	...	...	8		0 8				
	Mandya	..	...	...	...	...	...	...	14	—	0 14				
	Krishnarajpete	..	...	..	...	7	1	5	...	7	+ 0 95				
	Nagamangala	...	...	...	...	1	35	...	...	+	1 35				
	District average...	...	...	..	1	...	45	...	13	-	0 32				
HASSAN.	Hassan	...	...	...	1	...	...	...	4	—	0 4				
	Manarabad (Saklespur)	...	...	...	7	...	...	...	13	—	0 13				
	Arkalgud	...	...		9	...	53	...	24	+	0 29				
	Belur	...	...	...	13	...	10	...	14	—	0 4	Rice, 2nd sort.	10·00	9·50	10·15
	Channarayapatna	...	...	..	1	...	40	...	1	+	0 39				
	Arsikere	...	...	...	...	...	...	...	8	—	0 8	Ragi	20·00	18·00	22·16
	Hole-Narsipur	...	...	...	...	1	88	...	8	+	1 80	Kulthi	16·00	18·00	...
	Alur	...	..	...	...	...	...	...	12	—	0 13	Kadale	7·50	9·00	9·17
	District average..	...	...	..	4	...	36	...	10	+	0 26				
SHIMOGA.	Shimoga	...	...	...	5	...	...	...	9	—	0 10				
	Channagiri	...	...	...	.	...	...	...	3	—	0 3	Rice, 2nd sort	10·50	10·50	11·89
	Honnali	..	..	...	...	...	...	...	12	—	0 12				
	Shikarpur	...	...	...	...	...	...	...	...	...	...	Ragi	17·00	17·00	24·71
	Sorab	...	...	...	...	...	2	...	4	—	0 2	Kulthi	10·00	10·00	...
	Sagar	...	...		4	...	10	...	19	—	0 9				
	Nagar (Kallurkatte)	*	*	*	1	*	*	*	8	*	*				
	Tirthahalli	*	*	*	*	*	*	*	13	*	*				
	Kumsi	...	...	.	...	...	...	...	2	—	0 2				
	District average...	...	...	...	1	...	2	...	8	—	0 6				
KADUR.	Chikmagalur	...	...	...	1	...	19	...	21	—	0 2				
	Kadur	..	...	...	...	...	...	...	8	—	0 8	Rice, 2nd sort	9·25	8·75	11·10
	Tarikere	..	...	...	...	...	...	...	11	—	0 11				
	Koppa	..	...	...	4	...	41	...	27	+	0 14	Ragi	18·50	18·00	21·80
	Mudgere	...	...	...	4	...	...	...	11	—	0 11	Kulthi	11·00	11·00	...
	Yedahalli	..	...	...	2	...	...	...	6	—	0 6	Kadale	9·00	8·25	9·20
	Srinageri	..	...	...	...	...	19	...	15	+	0 4				
	District average...	...	...	...	2	...	11	...	14	—	0 3				
CHITALDRUG.	Chitaldrug	...	...	...	...	...	...	...	15	-	0 15				
	Challakere	...	...	.	...	...	...	...	2	—	0 2	Rice, 2nd sort	9·00	8·00	9·85
	Hiriyur	..	...	...	.	...	10	...	6	+	0 4				
	Holalkere	...	...	...	...	...	...	...	4	—	0 4	Ragi	16·00	16·00	22·90
	Davangere	..	...	...	..	...	...	...	4	—	0 4	Kulthi	13·00	8·00	...
	Molakalmuru	...	...	...	2	...	...	...	4	—	0 4	Kadale	8·00	11·00	9·40
	Jagalur	...	...	...	...	...	...	...	2	—	0 2	Cholum	16·00	18·00	21·07
	Hosdurga	..	...	...	...	...	...	...	2	—	0 2				
	Harihar	..	...	...	...	...	11	...	29	—	0 18				
	District average...	...	...		...	...	2	...	8	—	0 6				
	Provincial average ...	...	...	..	2	...	36	...	10	+	0 26				

* Reports not received.

Note—Rice (husked)—Oryza Sativa.
Ragi—Eleusine Corocana.
Kulthi—(Horse gram) Dolichos Biflorus.
Cholum—Sorghum Vulgare.
Kadale—(Bengal gram) Ciser Arietinum.

DISTRICT REPORTS.

8. Markets how supplied.
9. Progress of agricultural operations, state of standing crops, prospects and probable outturn of harvests, serious damage done to crops by insects or other natural calamities.
10. Prospects of season, tracts in which the rainfall has been insufficient, areas affected by scarcity, number of people under relief, and state of food stocks.
11. Public health.
12. Remarks as to the condition of agricultural stock, failure of pasturage of fodder, etc.

BANGALORE CIVIL AND MILITARY STATION.

	Average during the past 5 years.	*Current.*	
Prices of food grains—Rice ...	7¾	7 to 7½	seers per rupee.
Ragi ..	16¾	16½ to 17	

Agricultural operation.—Ragi harvested.

State of standing crops.—Fair.

Probable outturn of harvests.—About 7 to 8 annas.

Cattle are in good condition. Water and fodder sufficient.

BANGALORE CITY AND TALUKS.

8. Market well supplied.
9. *Standing crops* are reported to be in good condition.

Agricultural operations.—Ploughing operations are going on for Vaisakhi paddy in some parts. In Hoskote and Devanhalli Taluks sowing is going on. Sugar-cane is being milled in some parts.

10. Prospects of the season good.
11. Except for plague in Tavarekere and Sulavara, Magadi Taluk, and also in Kukkalahalli, Dodballapur Taluk, and small-pox in Dodballapur town, public health good.
12. Cattle healthy. Water and fodder available.

KOLAR.

8. Market well supplied.
9. *Standing crops* are in good condition.

Crops sown.—Vaisakhi paddy in all the taluks of the district, except Sidlaghatta, Chikballapur and Malur.

Crops harvested.—Karthika paddy in all the taluks of the district, except Malur and Gudibanda; togari and ballar in Bagepalli and Chikballapur; gram in Chikballapur and Gudibanda; sugar-cane in Gudibanda and castor in Bagepalli.

10. Prospects of the season good. Food stocks available.
11. Except for cholera in the Kannur village of the Bowringpet Taluk, public health generally good.
12. Cattle healthy. Water and fodder available.

TUMKUR.

8. Market well supplied.
9. *Agricultural operations.*—Harvesting and sowing of Vaisakhi paddy.

Standing crops are in good condition.

Crops sown.—Paddy throughout the district, except Chiknayakanhalli, Gubbi and Kunigal Taluks; wheat in Maddagiri and cholum in Pavagada.

Crops harvested.—Paddy in Tumkur; ballar, togari, horse gram, paddy, castor and sugar-cane in Maddagiri; ballar and togari in Chiknayakanhalli; sugar-cane, paddy, castor, togari, ballar and chillies in Sira; horse gram, ballar, togari and wild gingelly in Gubbi; ragi, savé, paddy, haraka, navane, cholum, togari, ballar and horse gram in Tiptur; paddy, togari, horse gram and ballar in Pavagada; sugar-cane, horse gram, ballar, wild gingelly, paddy and castor in Kunigal; paddy in Koratagere and sugar-cane in Turuvekere.

10. Prospects of the season good. Food stocks available.
11. Public health generally good.
12. Cattle healthy. Water and fodder sufficient.

MYSORE.

8. Market well supplied.

9. *Agricultural operations.*—Lands in parts of Gundlupet are being ploughed for sowing Kar seeds.

Standing crops are reported to be good in all the taluks.

Crops harvested and their probable outturn—

Chamrajnagar.—Paddy, coriander, horse gram, ballar and togari.

Heggaddevankote, Gundlupet.—Paddy and horse gram.

Nanjangud—Paddy.

T.-Narsipur.—Sugar-cane.

Malvalli.—Paddy.

Harvested ragi ... ... 4 to 12 annas.

Krishnarajpete.—Paddy ... ... 10 to 12 annas.

Togari ... 6 to 8 annas.

Nagamangala—paddy, haraka and horse gram. Bengal gram in parts of Chamrajnagar are reported to have been attacked with insects.

10. Prospects of the season good. Food stocks available.

11. Except for fever in some taluks and cholera in parts of the Nanjangud Taluk, public health good.

12. Cattle healthy. Water and fodder available.

HASSAN.

8. Market well supplied.

9. *Agricultural operation.*—Ploughing is continued in the Arkalgud Taluk.

Standing crops are in good condition.

Crops harvested.—Sugar-cane in the Hassan, Arkalgud, Belur and Channarayapatna Taluks and the Alur Sub-Taluk; togari in the Hassan, Channarayapatna and Hole-Narsipur Taluks; horse-gram in the Channarayapatna and Arsikere Taluks; paddy in the Belur and Channarayapatna Taluks; and haraka and wild gingelly in the Arsikere Taluk.

Outturn:—

Hassan Taluk.—Togari ... ... 8 annas.

Belur Taluk and Alur Sub-Taluk.—Paddy ... ... 12 „

Arsikere Taluk.—Ragi ... ... 8 to 12 annas.

10. Prospects of the season good. Food stocks available.

11. Except for plague in parts of the Arsikere, Hole-Narsipur and Belur Taluks, small-pox in parts of the Manjarabad Taluk, and fever in parts of the Hassan Taluk, public health generally good.

12. Cattle healthy. Water and fodder available.

SHIMOGA.

8. Market well supplied.

9. *Agricultural operations.*—Ground is being prepared in the Shimoga Taluk for planting sugar-cane. Sugar-cane is being milled in the Shimoga, Sorab, and Sagar Taluks and in the tracts under the Salur Anicut in the Shikarpur Taluk.

Standing crops.—Bengal-gram, ballar, and wheat crops are in fair condition. Cotton in the Honnali Taluk and sugar-cane in all the taluks are in good condition.

Crops harvested.—Castor in the Sorab Taluk is being harvested.

Estimate of crops harvested.—Sagar Taluk—paddy, ragi and arecanut 12 annas.

10 Prospects of the season good. Food stocks available.

11. Except for small-pox in some portions of the Channagiri, Honnali, Shikarpur, Sorab and Sagar Taluks, public health generally good.

12. Cattle generally healthy. Water and fodder available. In the town of Shikarpur and its suburbs, scarcity of water-supply is being felt to some extent.

42

8. Market well s[redacted]

9. *Standing crops.*—Suga[redacted]ne, ballar, jola and Bengal gr[redacted] sugar-cane in the Chikmagalur Taluk; coffee, arecanut[redacted] paddy in the Koppa Taluk; paddy, sugar-cane, ballar, to[redacted] wheat and cholum in the Kadur Taluk; paddy in the Yedahalli Sub-T[redacted] arecanut in the Yedahalli and Sringeri Sub-Taluks; and car paddy, co[redacted] arecanut, and cardamom in the Mudgere Taluk, are reported to be in fairly go[redacted] condition.

Crops harvested and their outturn :—

Tarikere Taluk—Bengal gram, horse gram, paddy, cholum, ragi, ballar and togari; yield from about 4 to 12 annas.

Koppa Taluk—Arecanut, coffee and paddy; yield from about 8 to 12 annas.

Kadur Taluk—Sugar-cane, paddy, togari, ballar, castor, ragi, coriander, horse gram, and cholum; yield from about 4 to 16 annas.

Sringeri Sub-Taluk—Paddy and arecanut; yield 12 annas.

Yedahalli Sub-Taluk—Paddy and arecanut; yield paddy 12 annas.

Mudgere Taluk—Coffee, arecanut and cardamom; yield from about 6 to 12 annas.

10. Prospects of the season generally good. Food stocks sufficient.

11. Except for ague in Chikmagalur and Koppa towns, plague at Sakrepatna village in the Kadur Taluk and small-pox in a few villages of Mudgere and Koppa Taluks and also in parts of Sringeri, public health generally good.

12. Cattle reported to be healthy. Water and fodder available.

CHITALDRUG.

8. Market well supplied.

9. *Agricultural operations*—Lands are being harrowed in the Holalkere Taluk.

Standing crops are in good condition.

Crops harvested and their outturn.—Ballar (cow gram) togari (pigeon pea), horse gram, castor in the Chitaldrug Taluk, yield 4 to 8 annas; togari, ballar and navani, (Italian millet) in the Jagalur Taluk, yield 8 to 12 annas; sugar-cane in the Davangere Taluk, yield 8 annas; horse gram, togari and ballar in the Hiriyur Taluk, yield 6 to 12 annas.

10. Prospects of the season good. Food stocks available.

11. Except for fever and cold in parts of Chitaldrug and small-pox in Hiriyur town, public health generally good

12. Cattle healthy. Water and fodder available.

BANGALORE,
30th January 1907.

A. RANGASWAMI IYENGAR,
Revenue Commissioner.

Memo dated 12th January 1907.

The accompanying extract from an article on "Some Diseases of Palms" by Dr. E. J. Butler, M.B., F.L.S., Imperial Mycologist, Agricultural Research Institute, Pusa, published in the "Agricultural Journal of India" for October 1906, and containing some notes on "*Kole roga*" disease of betel-nut palms, is republished for general information. Discussion of the subject is invited.

K. S. CHANDRASEKHARA AIYAR,
Secy. to Govt., Gen. & Rev. Depts.

SOME DISEASES OF PALMS.

BY E. J. BUTLER, M.B., F.L.S.,

Imperial Mycologist, Agricultural Research Institute, Pusa.

FUNGUS diseases of palms are rare, a fortunate matter if we consider the extraordinary value of these trees to the people of tropical countries. A few have appeared in India in recent years, each apparently confined to a particular part of the country and, while due to different causes, agreeing in their general effects.

KOLE ROGA DISEASE OF BETEL PALMS.

A disease of betel-nut palms (*Areca Catechu*) has been known in the Malnad districts of Mysore particularly near Koppa for many years. It is locally termed "kole roga" or black rot. Up to the present it has not been found elsewhere and, as it does not appear to have extended much during the time it has been observed, it is probably favoured by the special climatic conditions of the locality where it occurs.

The first symptom of the disease appears at the time of flowering. A number of the flowers fall without setting fruits, and their stalks blacken and putrify. The rot gradually extends along the inflorescence and affects the stalks on which nuts are forming, causing the latter to drop while immature. Very often the damage does not stop here. The flower stalk arises from the axil of the lowest leaf and, therefore, leads directly to the base of the swollen green part at the top of the stem. This green portion consists of a number of leaf sheaths, which clasp the young growing end of the palm, forming a thick protective covering to the growing point. The lowest of these sheaths becomes affected near the point of origin of the flower stalk, and a patch of rot makes its appearance at this point. The sheaths next underlying the first are then attacked and, since the internal parts are softer than those outside, the rot spreads with increasing rapidity as it approaches the apical bud. When the growing point in the centre of the bud is reached, it also is destroyed, and the whole head withers and falls off. Not alone therefore is the crop lost, but the whole tree is killed, the damage caused in the affected districts being very heavy.

In the disease spots on the leaf sheaths and also on the withered fruit stalks, a fungus of the genus *Phytophthora* is found. There is little doubt that this is the cause of the disease. The few species of *Phytophthora* are all virulent parasites, and though the well-known *Phytophthora infestans*, the cause of the potato disease, has been grown on dead substances, its development is much less vigorous than on its living host. The betel palm *Phytophthora* is evidently, from its position, anatomical characters and the enormous quantity of spores which it produces, an active parasite.

The fungus consists of a mycelium or vegetative part living within the tissues of the palm and extending out on to the surface, and of sporangia or reproductive bodies formed exclusively on the external filaments of the mycelium. The internal part consists of colourless threads lying between the cells. Here and there these filaments reach the surface and grow out into short branched threads. At the ends of these, and also sometimes on short stalks set laterally, the sporangia are produced. They are pear-shaped bodies with the broad end attached to the stalk, from which they fall easily. In water they germinate rapidly, giving rise each to a dozen or more tiny swimming spores, the zoospores. These swim off in all directions and after a time come to rest, get quite round and in their turn germinate by putting out a thread. It is by means of these sporangia and zoospores that the disease is propagated.

Since for their proper germination *Phytophthora* sporangia require to fall into water, most if not all the diseases due to these fungi are closely dependent on conditions of moisture and rainfall. For the spread of the betel-nut disease, which appears to begin on the flower and fruit stalks, it is necessary that the moisture conditions should be favourable during the time of setting of the fruit. The heavy monsoon rains in these parts of Mysore begin in June and last until the end of August or September. The following observations may serve to explain the increase in severity of the disease in recent years, and also its restriction to a single area.

When the disease first made its appearance, some thirty or forty years ago, it was customary to harvest the nuts in November or December. For the last twenty years the harvest has become earlier, being sometimes collected as soon as July or August. This indicates a change in the habit of the tree, due either to a different method of treatment or the introduction of an earlier variety. The effect of this is to expose the fruit stalks to infection at a time when th